Installation of Permanent Generators to Energize Single Family Homes, Duplexes and Townhouses

General requirements

- Completed permit application with the notarized signatures of the property owner and qualifying agent.
- Completed electrical fee sheet for category 38 fee code G012.
- Site plan indicating location of proposed generator and any associated permanent fuel tank(s) with the distances to existing buildings, and to property lines.
- Plans showing compliance with all the requirements listed below. A licensed electrical contractor shall prepare the electrical plans and a licensed plumbing contractor shall prepare the plumbing plans. The respective qualifiers' notarized and dated signature must appear on all pages. Alternatively, plans may be prepared, signed, sealed and dated by a professional engineer or a registered architect.

Department of Planning and Zoning Requirements

- Only generators fueled by propane or natural gas, not exceeding five (5) feet in height from finished grade to the top of the generator are allowed for permanent installation.
- The location of the generator shall meet the following setbacks:
    1. Front – behind the front building line
    2. Rear – five (5) feet
    3. Interior side – three (3) feet
    4. Side Street – behind the side street building line, unless completely screened from view by a wall or hedge. In no event shall a permanent installed generator be placed closer than ten (10) feet to the side street property line.
    5. No space required between the principal building and the generator.

Building Department Requirements

Electrical

- Location of electrical panel and transfer switch on site plan.
- Gas pipe bonding per National Electrical Code (NEC) 250.104(B)
- Connection between the generator frame and ground rod
- Generator specifications. Connected load, size of conduit, conductors, over current protection devices and switches. Generator one line diagram.
- Identify transfer switching as 'not separately derived'.

Mechanical

- Location of the generator exhaust with respect to exterior wall openings in the building. The generator exhaust shall be located 10 feet away from wall openings such as windows, doors, exhaust fans, appliance vents, etc. in accordance with the requirements of the Florida Residential Code, section R1602.2

Building Department Requirements (cont.)

Plumbing/Gas

- When the source of fuel is natural gas, location of natural gas meter on site plan.
- When the source of fuel is propane gas, containers shall be located 10 feet away from possible sources of ignition (air conditioned units, power switch, etc). Propane gas containers of 125 gals or less have no restriction with respect to separation distance to other containers, property lines or building lines. Larger containers shall comply with the minimum separation distances established by Tables 6.3.1, 6.4.2, and 6.4.5.8 and sections 6.3.2 through 6.3.12 of National Fire Protection Association (NFPA) 58.
- Location of water, sewer, well, and interceptors on site plan to verify that the proposed generator location is not in conflict with these systems.
- Gas piping diagram shall include the following information:
  1. Isometric of piping layout.
  2. Longest run of gas pipe (from source to farthest outlet).
  3. Pipe sizes(s).
  4. Appliance(s) BTU output.
  5. Type of materials used-gas table used from minimum sizing

Structural (Generator Pads)

- Generator pad size, thickness (minimum 6 inches) and reinforcement
- Generator anchoring detail as per manufacture's recommendation

Department of Environmental Resource Management (DERM)

September 2006: This policy has been developed using guidance provided by FEMA, and is predicated on the distinction between pre-firm and post firm homes, as well as on properties within Flood Zones and those outside of any Flood Zones.

Definitions:

PRE-FIRM: Built before 1974 (the enactment of Chapter 11C) and has not been substantially improved

POST-FIRM: Built after 1974 (the enactment of Chapter 11C) or a substantially improved property built before 1974.

PRE- FIRM

- Homes built prior to 1974 (Pre-Firm) which have not been substantially improved, shall place the top of the generator pad to match the existing lowest floor of the house or 12 inches above grade, whichever is highest. These permits will be inspected by the Building Dept. for compliance with said requirements. Applicants may submit a final elevation certificate in lieu of inspection.

POST- FIRM and NOT WITHIN A FLOOD ZONE, i.e. WITHIN AN X-ZONE

- Homes that are Post Firm structures in X zones shall place the top of the generator pad to match the existing lowest floor of the house or 12 inches above grade, whichever is highest. These permits will be inspected by the Building Dept. for compliance with said requirements. Applicants may submit a final elevation certificate in lieu of inspection.

POST- FIRM WITHIN A FLOOD ZONE,

- Post Firm structures within Flood Zones or structures that have been substantially improved and are within a Flood Zone, shall place the top of the generator pad above the BFE or County flood Criteria (CFC) plus 8 inches, whichever is highest. A final elevation certificate will be required.

Public Works Department

- When the generator's proposed location is within an easement, the Public Works Department reviews the application for compliance with Standard Detail G 2.2. Generator pads are treated the same as FPL transformer pads.

Installation of Permanent Generators to Energize Buildings
(other than Single Family Homes, Duplexes and Townhouses)

General requirements

- Completed permit application with the notarized signatures of the property owner and qualifying agent.
- Completed electrical fee sheet for category 38-fee code G012.
- Signed, sealed and dated plans prepared by a design professional. A licensed contractor may prepare the electrical plans within the limitations established by F.S. 471 and 489. The electrical qualifier's notarized signature must appear on all electrical pages.
- Site plan indicating location of proposed generator and any associated permanent fuel tank(s) with the distances to existing buildings, and to property lines.

Department of Planning and Zoning Requirements

- Permanent generators fueled by propane gas or natural gas not exceeding five (5) feet in height from finished grade to the top of the generator shall be permitted as an accessory use in certain residential districts and shall meet the following setbacks:

    1. Front – behind the front building line
    2. Rear – five (5) feet
    3. Interior side – three (3) feet in RU (Residential) districts, five (5) feet in EU (Estate), AU (Agriculture) and GU (Interim) districts.
    4. Side Street – behind the side street building line, unless completely screened from view by a wall or hedge. In no event shall a permanent installed generator be placed closer than ten (10) feet to the side street property line.
    5. Spacing – there shall be no spacing requirements between the principal building and the permanently installed generator.

- For the location of all other generators, please refer to Chapter 33-51 of the Code of Miami-Dade County for minimum setback distances for business and industrial zoning districts, excluding IU-C (see 33-273 for IU-C setback requirements). There is no minimum spacing required between buildings. For further information, please contact the Zoning Information Section at (305) 375-1806/1807 or the Zoning Permit Section at (786) 315-2666.

Building Department Requirements

Electrical

- Location of electrical panel and transfer switch on site plan.

- Gas pipe bonding per National Electrical Code (NEC) 250.104(B)
- Connection between the generator frame and ground rod
- Generator specifications. Connected load, size of conduit, conductors, over current protection devices and switches. Generator one line diagram.
- Identify transfer switching as 'separately derived' or 'not separately derived'.

Building Department Requirements (cont.)

Mechanical

- Location of the generator exhaust with respect to exterior wall openings in the building. The generator exhaust shall be located 10 feet away from wall openings such as windows, doors, exhaust fans, appliance vents, etc. in accordance with the requirements of the Florida Mechanical Code, section M401.5.1.

Plumbing/Gas (for propane and natural gas)

- When the source of fuel is natural gas, location of natural gas meter on site plan.
- When the source of fuel is propane gas, the location of containers shall comply with the minimum separation distances to other containers, buildings, property lines and sources of ignition established by Tables 6.3.1, 6.4.2, and 6.4.5.8 and sections 6.3.2 through 6.3.12 of National Fire Protection Association (NFPA) 58.
- Location of water, sewer, well, and interceptors on site plan
- Gas piping diagram shall include the following information:
    1. Isometric of piping layout.
    2. Longest run of gas pipe (from source to farthest outlet).
    3. Pipe sizes(s).
    4. Appliance(s) BTU output.
    5. Type of materials used-gas table used from minimum sizing

Structural (generator and fuel container pads)

- Nature of soil and allowable soil bearing capacity. Florida Building Code (FBC) Section 1818.1
- Generator and fuel container pad size, thickness and reinforcement
- Generator and fuel container anchoring detail
- Polyethylene sheets as vapor barrier beneath ground floor slab for 2" concrete cover. FBC Section 1820.4
- One field density test required, to be provided at the time of inspection to verify a minimum of 95% of maximum dry density. FBC Section 1820.3.2 & 1820.3.1

Department of Environmental Resource Management (DERM)

DERM plan review and approval is required for all Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs).

GENERAL REQUIREMENTS:

- New UST systems for fuel are required to have double wall construction, overfill prevention, overspill protection, tank interstitial monitoring, continuous automatic leak detection, anchoring, monitoring well network, protection from corrosion, etc. The components of the system must be on the approved state list.

- New AST systems for fuel require; secondary containment (double wall construction or spill containment dike), overfill prevention, overspill protection, tank interstitial monitoring, continuous automatic leak detection, anchoring, etc.
- Generator and fuel supply (excluding gas powered systems) shall be located a minimum of 100 feet from any potable water supply wells.
- Plans must provide a title block to be signed, sealed and dated by a Professional Engineer registered in the State of Florida, and a title block to be signed and dated by a Pollutant System Specialty Contractor (PSSC).
- Additionally, plans must show:
    - A location map, site plan, and/or floor plan showing locations water supply and wastewater systems
    - Size, design (double walled vs. single walled), material of construction and location (underground vs. above ground) of the fuel tank and type of fuel to power the generator.
    - Fuel piping layout in plan and profile (cross section showing piping running underground or above ground) of the entire piping running, showing all STP, fuel pumps, piping sumps, piping design (i.e. double walled vs. single walled), material, support and slope of the piping.
    - Compliance monitoring well (MW) network and MW detail(s).
    - Fuel tank pad and anchoring details or anti-buoyancy calculations.
    - All Electrical/mechanical equipment (including the generator, remote fill ports, top of tank, etc.) must be above the Base Flood Elevation and/or the required lowest floor elevation. Any system with a portion below the required elevations must show that it is resistant to floodwaters, hydrostatic, hydrodynamic, and buoyancy forces.

SPECIFIC COMMERCIAL REQUIREMENTS

Within the Northwest Wellfield and West Wellfield Interim Protection Area or within the Basic Wellfield Protection Area (i.e., within the 210 day boundary) of any public utility potable water supply well, any nonresidential land use proposing a generator will be required to utilize a gas (e.g. Natural Gas, LP Gas, etc.) fueled generator or obtain a variance from the Environmental Quality Control Board (EQCB) for the use, storage, and handling of a hazardous material (e.g. Gasoline, Diesel Fuel, etc).

- Any generator systems with fuel tanks greater than 550 gallons must provide a completed Florida Department of Environmental Protection (FDEP) Storage Tank Registration Form and a Spill Prevention and Response Plan (SPRP) signed and notarized by the responsible party.

- The required lowest floor elevation for commercial is the Base Flood Elevation or Crown of Road/County Flood Criteria + 4 inches, whichever is highest.

Public Works Department

When the generator's proposed location is within an easement, the Public Works Department reviews the application for compliance with Standard Detail G 2.2. Generator pads are treated the same as FPL transformer pads.

Fire Rescue Department (required for generators installed on Commercial properties)

- Plans must be provided with details to indicate compliance with NFPA 110 (2002 Edition)
- Clearly identify the Class, Type, and Level of the generator in accordance with NFPA 110 Chapter 4.
- Clearly identify the location of the remote annunciator.
- Clearly identify the location of the emergency shut-off controls required by NFPA 110 (5.6.5.6).
- Identify physical protection of the fuel containers and generator when located in areas subject to vehicular traffic.
- Plans must be provided with details to indicate compliance of the fuel system, and/or fuel storage system to be used (NFPA 30 (2000 edition), NFPA 37 (1998), NFPA 54 (2002), or NFPA 58 (2002).

This information is being provided to you as a guide to assist you with the permitting process for generators. Please contact each applicable agency to verify and obtain current information.

MIAMI-DADE COUNTY

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